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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,988	10/26/2000	Thomas C. Meiller	89190.145700/DP-302200	3296

7590 03/30/2004

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EXAMINER	
MCHENRY, KEVIN L	

ART UNIT	PAPER NUMBER
1725	

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/696,988	MEILLER ET AL.	
	Examiner	Art Unit	
	Kevin L McHenry	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-47 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-47 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 26 October 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/26/00.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 294. This item does not appear in the drawings; it is possible that the item was cut off from an edge of a drawing during copying or scanning. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

On page 10, line 10, "Evaporative" should not be capitalized.

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 9, 17, 18, 35, 46, and 47 are rejected under the judicially created doctrine of double patenting over claims 1, 2, 5, 6, 8, 12, and 20 of U. S. Patent No. 6,230,693 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a scrubber element with a housing and an elongate body with sorbent material inside the housing so that the element is in communication with a channel formed by the housing, and a ceramic heating element in the housing. The housing has a purge port, a vent port, and a vapor inlet port, with all ports in communication with the sorbent material. An auxiliary canister houses a sorbent material and is connected by a flow passage to the vent port of the primary canister.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 9, 22-24, 35, 46, and 47 are rejected under 35 U.S.C. 102(a) as being anticipated by Johnson et al. (U.S.P. 5,957,114).

Johnson et al. teach an automotive emissions control system that includes a housing that includes a purge port, a vent port, and a vapor inlet port. Sorbent material, such as activated carbon, is disposed within the housing so that the ports are in communication with the sorbent material. The housing is elongate and forms a channel within the housing. A second sorbent material is disposed within the housing intermediate the first sorbent material and the vent port so that any flow of air into and out of the vent port flows through the second sorbent material. A flow of air flowing through the first sorbent material, through the second sorbent material, and out the vent port would flow through the sorbent materials in series. A plenum serves to connect the channel of the housing and the vent port of the housing. (see U.S.P. 5,957,114; Figures 3 and 6A; column 1, lines 5-7; column 3, lines 52-61; column 4, lies 12-67; column 5, lines 1-12).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 9, 21-24, 35, 46, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by Jamrog et al. (U.S.P. 6,237,574).

Jamrog et al. teach an automotive emissions control system that includes a housing that includes a purge port, a vent port, and a vapor inlet port. Sorbent material, such as activated carbon, is disposed within the housing so that the ports are in communication with the sorbent material. The housing is elongate and forms a channel within the housing. A second sorbent material is disposed within the housing intermediate the first sorbent material and the vent port so that any flow of air into and out of the vent port flows through the second sorbent material. A flow of air flowing through the first sorbent material, through the second sorbent material, and out the vent port would flow through the sorbent materials in series. A plenum serves to connect the channel of the housing and the vent port of the housing. The housing taught by Jamrog et al. also contains flow diffusers near its ends. The flow diffusers are the frusto-conical sections 78 and 78'. (see U.S.P. 6,237,574; Figures 3 and 6A; column 1, lines 5-7; column 3, lines 43-67; column 4, lines 1-32; column 5, lines 4-38). The flow diffusing nature of such frusto-conical sections is shown by Chang et al. (see U.S.P. 3,964,875; column 1, lines 31-34).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-5, 10-13, 25-29, and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S.P. 5,957,114) as applied to claims 9, 22-24, 35, 46, and 47 above, and further in view of Park et al. (U.S.P. 5,924,294).

Johnson et al. teach the system noted in section 8. However, Johnson et al. do not teach that the sorbent material has a plurality of passages so that the sorbent material has a body that is coated with or constructed of the sorbent material.

Park et al. teach a scrubber element containing activated carbon. Park et al. teach that formed bodies of activated carbon with passages are desirable for applications with reasonably high rates of fluid flow and a desired low level of back pressure. Park et al. further teach that their process produces such bodies so that they are made without cracking and have sufficient strength. The body is made by extruding the body from a mixture of activated carbon, ceramic forming material, flux material, a binder, and water. (see U.S.P. 5,914,294; column 1, lines 6-10, 27-34, 65-67; column 2, lines 1-4, 15-34, 41-45, 50-51; column 3, line 27-36, 44-49; column 4, lines 10-14, 45-55).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the system of Johnson et al. by the teachings of Park et al. One would have been motivated to do so in order to provide a

scrubber element that was suitable for high fluid flow rates and low back pressures while having a sufficient strength, as taught by Park et al.

11. Claims 1-5, 10-13, 25-29, 34, 36-40, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamrog et al. (U.S.P. 6,237,574) as applied to claims 9, 21-24, 35, 46, and 47 above, and further in view of Park et al. (U.S.P. 5,924,294).

Jamrog et al. teach the system noted in section 6. However, Johnson et al. do not teach that the sorbent material has a plurality of passages so that the sorbent material has a body that is coated with or constructed of the sorbent material.

Park et al. teach a scrubber element containing activated carbon. Park et al. teach that formed bodies of activated carbon with passages are desirable for applications with reasonably high rates of fluid flow and a desired low level of back pressure. Park et al. further teach that their process produces such bodies so that they are made without cracking and have sufficient strength. The body is made by extruding the body from a mixture of activated carbon, ceramic forming material, flux material, a binder, and water. (see U.S.P. 5,914,294; column 1, lines 6-10, 27-34, 65-67; column 2, lines 1-4, 15-34, 41-45, 50-51; column 3, line 27-36, 44-49; column 4, lines 10-14, 45-55).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the system of Jamrog et al. by the teachings of Park et al. One would have been motivated to do so in order to provide a scrubber element that was suitable for high fluid flow rates and low back pressures while having a sufficient strength, as taught by Park et al.

12. Claims 21, 34, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S.P. 5,957,114) in view of Park et al. (U.S.P. 5,924,294) as applied to claims 1-5, 9-13, 22-29, 35-40, 46, and 47 above, and further in view of Chang et al. (U.S.P. 3,964,875).

The former references teach the system described above in section 10. However, these references do not teach the use of a flow diffuser.

Chang et al. teach a sorbent element that includes a flow diffuser disposed near one end of the element. Chang et al. teach that the flow diffuser provides an improved flow front for gases that pass through the element (see U.S.P. 3,964,875; Figure3; column 1, lines 55-65).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the system taught above by the teachings of Chang et al. One would have been motivated to provide a flow diffuser in order to provide an improved flow front for gases that pass through the scrubber element, as taught by Chang et al.

13. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S.P. 5,957,114) in view of Park et al. (U.S.P. 5,924,294) as applied to claims 1-5, 9-13, 22-29, 35-40, 46, and 47 above, and as being unpatentable over Jamrog et al. (U.S.P. 6,237,574) in view of Park et al. (U.S.P. 5,924,294) as applied to claims 1-5, 9-13, 21-29, 34-40, and 45-47, and further in view of Mizuno et al. (U.S.P. 4,386,947).

The former references teach the systems taught in sections 10 and 11. However, these references do not teach that the scrubber includes seals.

Mizuno et al. teach a scrubber in which a rubber seal is placed between the periphery of the scrubber element and the scrubber housing to seal the scrubber and prevent flow through interstices between the element and housing. Mizuno et al. also teach a scrubber element with a face seal to prevent flow through interstices formed between the scrubber end and the housing. (see U.S.P. 4,386,947; Figures 7 and 11; column 6, lines 44-56; column 7, lines 16-33, 68; column 8, lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the systems taught above by the teachings of Mizuno et al. One would have been motivated to do so in order to provide seals to prevent flow between the scrubber and housing, as taught by Mizuno et al.

14. Claims 6-8, 17-20, 30-33, and 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (U.S.P. 5,957,114) in view of Park et al. (U.S.P. 5,924,294) as applied to claims 1-5, 9-13, 22-29, 35-40, 46, and 47 above, and as being unpatentable over Jamrog et al. (U.S.P. 6,237,574) in view of Park et al. (U.S.P. 5,924,294) as applied to claims 1-5, 9-13, 21-29, 34-40, and 45-47, and further in view of Gadkaree et al. (U.S.P. 6,097,011).

The former references teach the systems taught in sections 10 and 11. However, these references do not teach the use of a heater.

Gadkaree et al. teach that scrubber elements with activated carbon may have electric current passed through them in order to facilitate desorption of adsorbed gases so that the body regenerates for continued use. Gadkaree et al. teach that wires connect a power source to metal coatings on the surface of the scrubber body. The contacts

provide electricity and heat to the body, which in turn produces heat from the resistive properties of its carbon/ceramic body. (see U.S.P. 6,097,011; Figure 3; column 1, lines 7-17; column 2, lines 8-13, 22-30, 66-67; column 3, lines 1-6; column 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the systems noted above by the teachings of Gadkaree et al. One would have been motivated to do so in order to provide a means of regenerating the sorbent material for continued use, as taught by Gadkaree et al.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fargo et al. (U.S.P. 5,806,500), Heiligman (U.S.P. 5,453,118), Kato et al. (U.S.P. 5,861,611), Kato et al. (U.S.P. 5,800,787), Biller et al. (U.S.P. 3,352,294), Takimoto et al. (U.S.P. 4,112,898), and Socha, Jr. (U.S.P. 5,966,929) are cited of interest for illustrating the state of the art in scrubber design.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (571) 272-1181. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin McHenry

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3/22/04